

# Will Simmons

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## Education

### Master of Public Health, Epidemiology & Applied Biostatistics

2018 - 2020

Columbia University, Mailman School of Public Health, New York, NY

(anticipated)

*Relevant coursework:* epidemiologic study design, biostatistics methods (e.g. regression/GLMs, survival analysis, longitudinal analysis), environmental health modeling, pharmaceutical/RCT statistics, machine learning, statistical programming (R, SAS, SQL) GPA: 4.0

### Bachelor of Science, Neuroscience

2011 - 2015

Baylor University, Waco, TX

*Relevant coursework:* neuroanatomy & physiology, community-based health research, biostatistics, mixed models GPA: 4.0

## Current and Previous Research

### Fine particulate matter, extreme heat events, and congenital heart defects

Nov. 2019 - present

Department of Epidemiology, Columbia University Mailman School of Public Health

- Conducting large, population-based case-control study on environmental risk factors for birth defects in US
- Investigate relationships between maternal exposures (extreme heat events, PM<sub>2.5</sub>) and congenital heart defect subtypes
- Prepare and analyze data from the National Birth Defects Prevention Study (NBDPS), largest US study of its kind
- Supported by nationwide research sites and the Centers for Disease Control (CDC) ([info](#))

### Climate variation and under-5 weight-for-height

Feb. 2019 - present

International Research Institute for Climate & Society, Earth Institute, Columbia University

- Conducting large, population-based time series study on climatic risk factors for child development in Bangladesh
- Investigate associations between extreme climate events and child anthropometry at seasonal and sub-seasonal scales
- Merge, harmonize, and analyze large, administrative climate and nutrition surveillance datasets
- Contribute biostatistical and epidemiological skillset to team of top Columbia researchers for ACToday Project ([info](#))

### Water quality, food security, and under-5 anthropometry

Jan. 2013 - May 2015

Baylor University, Waco, TX

- Conducted cross-sectional study of household-level dietary and environmental risk factors for child development
- Investigated associations between dietary diversity, water quality, and anthropometry in indigenous Luo community
- Results used to inform NGO-led water and nutrition interventions utilized by 1,000+ in Nyakach, Kenya

## Scholarships, Honors, and Professional Memberships

Member, American Statistical Association	2020 - present
1st prize - research poster presentation, NYC Clinical Climate Change Conference, Mt. Sinai	2020
1st prize - research presentation, Master's Student Day, Columbia Dept. of Epidemiology	2019
Delta Omega Honor Society	2019
Wyman Scholar, Columbia University (full tuition: \$80,000)	2018
Phi Beta Kappa Honor Society	2014
Glenn McCrary Goodrich Scholarship Award for International Research (\$3,500)	2013
Regent's Gold Scholar, Baylor University (full tuition: \$138,000)	2011

## Teaching and Professional Experience

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### Graduate Teaching Assistant

Aug. 2019 - Dec. 2019

Departments of Biostatistics & Epidemiology, Columbia University Mailman School of Public Health

- Teaching assistant for graduate-level Quantitative Methods module in Columbia MSPH's CORE Curriculum
- Instructed 25 first-year master's students once weekly in introductory biostatistics and epidemiology

### Food Systems Specialist

Aug. 2015 - Jul. 2018

Hawai'i Alliance for Community-Based Economic Development, Honolulu, HI

- Coordinated interisland network of 20+ grassroots organizations in indigenous health and environmental justice
- Wrote successful grant proposals and contracts totaling \$600,000+ for community food systems work

### Lead Program Evaluator

May 2015 - Aug. 2015

Our Children, Their Nutrition

- Senior data analyst: led analytics, monitoring, and evaluation of childhood nutrition education program
- Contributed to research presented at APHA 2015 Annual Meeting

### Development Intern, Africa Bureau

Jun. 2014 - Aug. 2014

United States Agency for International Development (USAID), Washington, DC

- Provided technical and capacity building support to Country Development Officers throughout Southern Africa
- Created briefing materials for high-level initiatives, including President Barack Obama's Young African Leaders Initiative

## Publications

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*In preparation:*

**Simmons W**, Stingone J, Luben T, Sheridan S, Langlois P, Shaw G, Reefhuis J, Romitti P, Feldkamp M, Nembhard W, Browne M, Lin S, and the National Birth Defects Prevention Study. Interaction of fine particulate matter and extreme heat in association with congenital heart defects.

**Simmons W**, Parks RM, Downs S, Nissan H. Time series analysis of associations between extreme climate events and under-5 growth faltering: Bangladesh, 1990-2006.

## Presentations

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**Simmons W**, Nissan H (2020). *Climate variation and anthropometric indicators of under-5 nutrition: Bangladesh, 1990-2006*. Poster, 2nd Annual Conference on Clinical Climate Change. Icahn School of Medicine at Mount Sinai. New York, NY. First prize.

"Food, climate, and environment: What's next?" (2019). Panel moderator and organizer. Columbia University Mailman School of Public Health. New York, NY.

**Simmons W**, Nissan H (2019). *Associations between climate and under-5 nutritional status in Bangladesh, 1990-2006*. Invited presentation, Epi Master's Student Day. Columbia University Mailman School of Public Health. New York, NY. First prize.

**Simmons W**, Baker L (2016). *Clean water, food security, or protein? A study of growth among children in rural western Kenya*. Contributor to presentation, 13th Annual Global Health & Innovation Conference. Yale University, New Haven, CT.

## Skills

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### Languages, Software, & Packages

Proficient: R (tidyverse, caret), SAS, SQL (MySQL, MS Access)  
Familiar: R Shiny, MATLAB, QGIS

### Certifications

HIPAA, CITI Human Subjects

### Tools

Familiar: Git/DVCS, L<sup>A</sup>T<sub>E</sub>X